Virginia Title V Operating Permit

Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-305 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Sterilization Services of Virginia, Inc.
Facility Name:	Sterilization Services of Virginia
Facility Location:	5674 Eastport Blvd Henrico County, VA
Registration Number:	51000
Permit Number:	PR051000

May 28, 2003
Effective Date

May 28, 2008
Expiration Date

Robert G. Burnley
Director, Department of Environmental Quality

Signature Date

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I. Facility Information

Permittee
Sterilization Services of Virginia, Inc.
350 Barklay Blvd
Lincolnshire, IL 60069

Responsible Official
Tom Fisher
General Manager

Facility
Sterilization Services of Virginia
5674 Eastport Blvd
Henrico County, VA

Contact person
Mr. Tom Fisher
General Manager
(404) 344-8423

AIRS Identification Number: 51-087-0159

Facility Description: SIC Code 7389 – Business Services, Not Elsewhere Classified

Establishments primarily engaged in furnishing business services, not elsewhere classified, on a commission or fee basis:

Product sterilization service

Sterilization Service of Virginia sterilizes surgical instruments and medical products by the use of four ethylene oxide sterilizers which are controlled by a packed tower scrubber along with the use of seven aeration rooms all of which are controlled by a catalytic oxidizer.

The facility is a Title V major source of HAPs (i.e. Ethylene Oxide) and is subject to MACT O (40 CFR 63, Subpart O, Ethylene Oxide Emissions Standard for Sterilization Facilities) as a source using 10 tons or more of ethylene oxide in any consecutive 12-month period. This source is located in an attainment area for all criteria pollutants; however, the source is located in a VOC control area for VOCs. The facility was previously permitted under a Minor NSR Permit as listed in this Title V permit.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
1S1	E1	Vacudyne Contact Medical Products Ethylene Oxide Sterilizer # J90-12	Size (1S1): 4,938 cubic feet	Croll-Reynolds packed tower ethyl glycol scrubber	E1	VOC (Ethylene Oxide)	4/9/03
2S1	E1	Vacudyne Contact Medical Products Ethylene Oxide Sterilizer # J90-97	Size (2S1): 2,469 cubic feet	Croll-Reynolds packed tower ethyl glycol scrubber	E1	VOC (Ethylene Oxide)	4/9/03
3S1	E1	Vacudyne Contact Medical Products Ethylene Oxide Sterilizer # J90-98	Size (3S1): 1,708 cubic feet	Croll-Reynolds packed tower ethyl glycol scrubber	E1	VOC (Ethylene Oxide)	4/9/03
4S1	E1	Vacudyne Contact Medical Products Ethylene Oxide Sterilizer	Size (4S1): 1,575 cubic feet	Croll-Reynolds packed tower ethyl glycol scrubber	E1	VOC (Ethylene Oxide)	4/9/03
1 – 7 AE	E2	(7) Ethylene oxide aeration rooms for sealed surgical kits and other medical kits	Combined Capacity: 1,210.7 lbs/hr of Ethylene Oxide (ETO) input	Vacudyne Catalytic Oxidizer	E2	VOC (Ethylene Oxide)	4/9/03
CEVs	FUG.	Chamber exhaust vents		NA	NA	VOC (Ethylene Oxide)	4/9/03

III. TABLE 1 OF 40 CFR 63.360—GENERAL PROVISIONS APPLICABILITY TO SUBPART O

Reference	Applies to sources using 10 tons in subpart O[a]	Applies to sources using 1 to 10 tons in subpart O[a]	Comment
63.1(a)(1)	Yes		Additional terms defined in § 63.361; when overlap between subparts A and O occurs, subpart O takes precedence.
63.1(a)(2)	Yes		
63.1(a)(3)	Yes		
63.1(a)(4)	Yes		Subpart O clarifies the applicability of each paragraph in subpart A to sources subject to subpart O.
63.1(a)(5)	No		Reserved.
63.1(a)(6)	Yes		
63.1(a)(7)	Yes		
63.1.1(a)(8)	Yes		
63.1(a)(9)	No		Reserved.
63.1(a)(10)	Yes		
63.1(a)(11)	Yes		§ 63.366(a) of subpart O also allows re-port submissions via fax and on electronic media.
63.1(a)(12)–(14)	Yes		
63.1(b)(1)–(2)	Yes		
63.1(b)(3)	No		§ 63.367 clarifies the applicability of recordkeeping requirements for sources that determine they are not subject to the emissions standards.
63.1(c)(1)	Yes		Subpart O clarifies the applicability of each paragraph in subpart A to sources subject to subpart O in this table.
63.1(c)(2)	Yes		Subpart O also specifies which sources are required to obtain a Title V permit in § 63.360.
63.1(c)(3)	No		Reserved.
63.1(c)(4)	Yes		
63.1(c)(5)	No		§ 63.360 specifies applicability.
63.1(d)	No		Reserved.
63.1(e)	Yes		
63.2	Yes		Additional terms defined in § 63.361; when overlap between subparts A and O occurs, subpart O takes precedence.
63.3	Yes		Other units used in subpart O are defined in the text of subpart O.
63.4(a)(1)-(3)	Yes		
63.4(a)(4)	No		Reserved.
63.4(a)(5)	Yes		
63.4(b)	Yes		
63.4(c)	Yes		
63.5(a)	No		§ 63.366(b)(1) contains applicability requirements for constructed or reconstructed sources.
63.5(b)(1)	Yes	No	
63.5(b)(2)	No		Reserved.
63.5(b)(3)	No		See § 63.366(b)(2).

63.5(b)(4)	Yes	No	
63.5(b)(5)	Yes	No	
63.5(b)(6)	Yes	No	
63.5(c)	No		Reserved.
63.5(d)(1)-(2)	No		See § 63.366(b)(3).
63.5(d)(3)-(4)	Yes	No	
63.5(e)	Yes	No	
63.5(f)(1) and (2)	No		See § 63.366(b)(4).
63.6(a)(1)	Yes		
63.6(a)(2)	No		§ 63.360 specifies applicability.
63.6(b) and (c)	No		§ 63.360(g) specifies compliance dates for sources.
63.6(d)	No		Reserved.
63.6(e)	No		Subpart O does not contain any operation and maintenance plan requirements.
63.6(f)(1)	No		§ 63.362(b) specifies when the standards apply.
63.6(f)(2)(i)	Yes		
63.6(f)(2)(ii)	No		§ 63.363 specifies parameters for determining compliance.
63.6(f)(2)(iii)-(iv)	Yes		
63.6(f)(2)(v)	No		
63.6(f)(3)	Yes		
63.6(g)	Yes		
63.6(h)	No		Subpart O does not contain any opacity or visible emission standards.
63.6(i)(1)-(14)	Yes		
63.6(i)(15)	No		Reserved
63.6(i)(16)	Yes		
63.6(j)	Yes		
63.7(a)(1)	Yes		
63.7(a)(2)	Yes		
63.7(a)(3)	Yes		
63.7(b)	Yes		
63.7(c)	Yes	No……	
63.7(d)	Yes	No……	
63.7(e)	Yes		§ 63.365 also contains test methods specific to sources subject to the emissions standards.
63.7(f)	Yes		
63.7(g)(1)	Yes		
63.7(g)(2)	No		Reserved
63.7(g)(3)	Yes		
63.7(h)	Yes		
63.8(a)(1)	Yes		
63.8(a)(2)	Yes		
63.8(a)(3)	No		Reserved
63.8(a)(4)	Yes		
63.8(b)(1)	Yes		
63.8(b)(2)	Yes		
63.8(b)(3)	No		
63.8(c)(1) (i) and (ii)	No		A startup, shutdown, and malfunction plan is not required for these standards.
63.8(c)(1)(iii)	Yes		
63.8(c)(2)-(3)	Yes		
63.8(c)(4)–(5)	No		Frequency of monitoring measurements is provided in § 63.364; opacity monitors are not required for these standards.
63.8(c)(6)	No		Performance specifications for gas chromatographs and temperature

				monitors are contained in § 63.365.
63.8(c)(7)(i)(A)–(B)		No		Performance specifications for gas chromatographs and temperature monitors are contained in § 63.365.
63.8(c)(7)(i)(C)		No		Opacity monitors are not required for these standards.
63.8(c)(7)(ii)		No		Performance specifications for gas chromatographs and temperature monitors are contained in § 63.365.
63.8(c)(8)		No		
63.8(d)	Yes		No	
63.8(e)(1)		Yes		
63.8(e)(2)		Yes		
63.8(e)(3)		Yes	No	
63.8(e)(4)		Yes		
63.8(e)(5)(i)		Yes		
63.8(e)(5)(ii)		No		Opacity monitors are not required for these standards.
63.8(f)(1)–(5)		Yes		
63.8(f)(6)		No		
63.8(g)(1)		Yes		
63.8(g)(2)		No		
63.8(g)(3)–(5)		Yes		
63.9(a)		Yes		
63.9(b)(1)–(i)		Yes		
63.9(b)(1)(ii)–(iii)		No		§ 63.366(c)(1)(i) contains language for sources that increase usage such that the source becomes subject to the emissions standards.
63.9(b)(2)–(3)		Yes		§ 63.366(c)(3) contains additional information to be included in the initial report for existing and new sources.
63.9(b)(4)–(5)		No		§ 63.366(c)(1)(ii) and (iii) contains requirements for new or reconstructed sources subject to the emissions standards.
63.9(c)		Yes		
63.9(d)		No		
63.9(e)		Yes		
63.9(f)		No		Opacity monitors are not required for these standards.
63.9(g)(1)		Yes		
63.9(g)(2)–(3)		No		Opacity monitors and relative accuracy testing are not required for these standards.
63.9(h)(1)–(3)		Yes		
63.9(h)(4)		No		Reserved.
63.9(h)(5)		No		§ 63.366(c)(2) instructs sources to submit actual data.
63.9(h)(6)		Yes		
63.9(i)		Yes		
63.9(j)		Yes		
63.10(a)		Yes		
63.10(b)(1)		Yes		
63.10(b)(2)(i)		No		Not applicable due to batch nature of the industry.
63.10(b)(2)(ii)		Yes		
63.10(b)(2)(iii)		No		
63.10(b)(2)(iv)–(v)		No		A startup, shutdown, and malfunction plan is not required for these standards.
63.10(b)(2)(vi)–(xii)		Yes		

63.10(b)(2)(xiii)		No	
63.10(b)(2)(xiv)		Yes	
63.10(b)(3)		No	§ 63.367 (b) and (c) contains applicability determination requirements.
63.10(c)(1)		Yes	
63.10(c)(2)–(4)		No	Reserved.
63.10(c)(5)		Yes	
63.10(c)(6)		No	
63.10(c)(7)		No	Not applicable due to batch nature of the industry.
63.10(c)(8)		Yes	
63.10(c)(9)		No	Reserved.
63.10(c)(10)–(13)		Yes	
63.10(c)(14)	Yes	No	
63.10(c)(15)		No	A startup, shutdown, and malfunction plan is not required for these standards.
63.10(d)(1)		Yes	
63.10(d)(2)		Yes	
63.10(d)(3)		No	Subpart O does not contain opacity or visible emissions standards.
63.10(d)(4)		Yes	
63.10(d)(5)		No	A startup, shutdown, and malfunction plan is not required for these standards.
63.10(e)(1)		Yes	
63.10(e)(2)(i)		Yes	
63.10(e)(2)(ii)		No	Opacity monitors are not required for these standards.
63.10(e)(3)(i)–(iv)		Yes	
63.10(e)(3)(v)		No	§ 63.366(a)(3) specifies contents and submittal dates for excess emissions and monitoring system performance reports.
63.10(e)(3)(vi)–(viii)		Yes	
63.10(e)(4)		No	Opacity monitors are not required for these standards.
63.10(f)		Yes	
63.11		Yes	
63.12–63.15		Yes	

a: See definitions as listed below:

Source(s) using 10 tons means source(s) using 9070 kg (10 tons) or more of ethylene oxide in any consecutive 12-month period after December 6, 1996.

Source(s) using 1 to 10 tons means source(s) using 907 kg (1 ton) or more of ethylene oxide in any consecutive 12-month period but less than 9,070 kg (10 tons) of ethylene oxide in all consecutive 12-month periods after December 6, 1996.

IV. Process Equipment Requirements - (emission unit ID#s 1S1 - 4S1, 1 – 7 AE and CEVs)

A. Control Technology Requirements

1. **Emission Controls and Control Efficiency -** Ethylene oxide emissions from each of the sterilization chamber vents (emission unit ID #s: 1-7AE) shall be controlled by a packed tower scrubber with a control efficiency of 99%. The scrubber and sterilizers shall be provided with adequate access for inspection.
(9 VAC 5-80-110, Condition 4 of the April 9, 2003 permit, and 40 CFR 63, Subpart O, Section 63.362)

2. **Emission Controls and Control Efficiency -** Ethylene oxide emissions from each aeration room vent (emissions unit ID #s: 1-7AE) shall be controlled by a catalytic oxidizer with a control efficiency of 99%. The catalytic oxidizer shall be provided with adequate access for inspection.
(9 VAC 5-80-110, Condition 5 of the April 9, 2003 permit, and 40 CFR 63, Subpart O, Section 63.362)

3. The number of nitrogen washes and/or vacuum flushes of the sterilization chamber (emission unit ID #: 1S1 – 4S1) shall be in accordance with product requirements.
(9 VAC 5-80-110 and Condition 6 of the April 9, 2003 permit)

4. The four sterilization chambers and the seven aeration rooms (emission unit ID #s: 1S1 – 4S1 and 1-7 AE) shall be designed so that they shall not individually nor collectively operate without the control equipment being on line.
(9 VAC 5-80-110 and Condition 7 of the April 9, 2003 permit)

5. No more than two sterilizing chamber vents (emission unit ID #s: 1S1 – 4S1) shall exhaust emissions to the scrubber at any one time.
(9 VAC 5-80-110 and Condition 8 of the April 9, 2003 permit)

6. The exhaust stacks (emission uinit ID #s: 1S1 – 4S1 and 1 – 7 AE) shall be constructed to minimum heights as specified below:

Scrubber exhaust stack	45 feet
Oxidizer exhaust stack	45 feet

(9 VAC 5-80-110 and Condition 19 of the April 9, 2003 permit)

B. Emission Estimates and Requirements

1. **Requirements by Reference** - This facility shall operate in conformance with 40 CFR 63, Subpart O, Ethylene Oxide Emissions Standard for Sterilization Facilities (MACT Standard).
(9 VAC 5-80-110 and Condition 3 of the April 9, 2003 permit)

2. Emissions from the scrubber exhaust (emission unit ID #s: 1S1 – 4S1) shall not exceed the limitations specified below:

Volatile Organic Compounds (Ethylene Oxide)	11.60 lb/hr	3.44 tons/yr*

*****Annual emissions shall be determined by the monthly usage of ethylene oxide calculated as the sum of each consecutive 12 month period.

(9 VAC 5-80-110 and Condition 20 of the April 9, 2003 permit)

3. Emissions from the oxidizer exhaust (emission unit ID #s: 1 – 7 AE) shall not exceed the limitations specified below:

Volatile Organic Compounds (Ethylene Oxide)	0.36 lb/hr	0.11 tons/yr*

*Annual emissions shall be determined by the monthly usage of ethylene oxide calculated as the sum of each consecutive 12 month period.

(9 VAC 5-80-110 and Condition 21 of the April 9, 2003 permit)

4. Emissions from the chamber exhaust vents (emission unit ID #s: CEVs) shall not exceed the limitations specified below:

Volatile Organic Compounds (Ethylene Oxide)	14.53 lb/hr	4.31 tons/yr*

*Annual emissions shall be determined by the monthly usage of ethylene oxide calculated as the sum of each consecutive 12 month period.

(9 VAC 5-50-260 Condition 22 of the April 9, 2003 permit)

5. Visible emissions from each of the exhaust stacks (emission unit ID #s: 1S1 – 4S1 and 1 – 7 AE) shall not exceed zero percent opacity.
(9 VAC 5-80-110 and Condition 23 of the April 9, 2003 permit)

C. Monitoring Requirements and Recordkeeping

1. The recirculation tank shall be equipped with a liquid level indicator to measure the scrubber liquor tank level (emission unit ID #s: 1S1 – 4S1). The liquid level indicator shall be maintained so that it is in proper working order at all times.
(9 VAC 5-80-110, Condition 9 of the April 9, 2003 permit and 40 CFR 63.364(b)(2))

2. The scrubber liquor level (emission unit ID #s: 1S1 – 4S1) in the recirculation tank shall be measured and recorded at least once per week. Monitoring is required during a week only if the scrubber unit has been operated. A low-flow alarm shall be installed to ensure adequate water flow to the scrubber. The low-flow alarm shall be maintained by the permittee such that it is in proper working order at all times. An annual internal inspection shall be conducted on the scrubber packing.
(9 VAC 5-80-110, Condition 10 of the April 9, 2003 permit and 40 CFR 63.364(b)(2))

3. The volume of any liquids added to the scrubber system (emission unit ID #s: 1S1 – 4S1) shall be recorded.
(9 VAC 5-80-110 and Condition 11 of the April 9, 2003 permit)

4. The operating limit for the packed tower scrubber (emission unit ID #s: 1S1 – 4S1) shall not exceed the maximum liquor (recirculation) tank level of 8 feet 3 inches.
(9 VAC 5-80-110, Condition 12 of the April 9, 2003 permit and 40 CFR 63.363(b)(2)(ii))

5. The permittee shall install, calibrate, operate, and maintain a temperature monitor accurate to $\pm$10°F (5.6°C) at the outlet to the catalyst bed (emission unit ID #: 1 – 7 AE).

The accuracy of the temperature monitor shall be verified twice each calendar year with a reference temperature monitor traceable to National Institute of Standards and Technology standards or an independent temperature measurement device dedicated for this purpose. During accuracy checking, the probe of the reference shall be at the same location as the temperature monitor being tested. As an alternative, the accuracy temperature monitor may be verified in a calibrated oven (traceable to NIST standards).
(9 VAC 5-80-110, Condition 13 of the April 9, 2003 permit and 40 CFR 63.364(c)(4))

6. A data acquisition system for the temperature monitor shall continuously monitor the oxidation temperature (emission unit ID #s: 1 – 7 AE) at the outlet to the catalyst bed. The outlet temperature shall be recorded on a continuous basis (from 15 minutes or shorter) and shall be retained on site for 5 years.
(9 VAC 5-80-110, Condition 14 of the April 9, 2003 permit and 40 CFR 63.364(c))

7. The operating limit consists of the recommended minimum oxidation temperature (emission unit ID #: 1-7 AE) provided by the oxidation unit manufacturer for an operating limit.
(9 VAC 5-80-110, Condition 15 of the April 9, 2003 permit and 40 CFR 63.363(b)(3))

8. The computerized interlock system for the sterilization chambers and the aeration rooms air system shall remain in place to ensure the control equipment is on line when the sterilization chambers and the aeration rooms (emission unit ID #s: 1S1-4S1 and 1-7 AE) are in use.
(9 VAC 5-80-110)

9. The computerized interlock system for the sterilizing chamber vents shall remain in place to ensure no more than two sterilizing chamber vents (emission unit ID #s: 1S1-4S1) are being exhausted at any one time to the scrubber.
(9 VAC 5-80-110)

10. The catalytic oxidizer (emission unit ID #s: 1-7 AE) shall comply with the following work practice:

    (i) Every 5 years, beginning 5 years after the initial compliance test as per 40 CFR 63.363, replace the catalyst bed with new catalyst material.

    (9 VAC 5-80-110, Condition 16 of the April 9, 2003 permit and 40 CFR 63.363(b)(4))

11. The facility must demonstrate continuous compliance with each operating limit and work practice standard (emission unit ID #s: 1S1 – 4S1 and 1-7 AE) required under 40 CFR § 63.363 (compliance and performance provisions) (such as condition nos. III C. 4, 7, and 10), except during periods of startup, shutdown, and malfunction, according to the methods specified in 40 CFR § 63.364 (monitoring requirements) (such as condition nos. III C. 1, 2, 5, and 6).
(9 VAC 5-80-110, Condition 17 of the April 9, 2003 permit and 40 CFR 63.363(f))

12. The facility shall use no more than 718,330 lbs per year of volatile organic compounds (ethylene oxide) (emission unit ID #: 1S1 – 4S1, 1 – 7 AE and CEVs) calculated monthly for each consecutive 12 month period.
(9 VAC 5-80-110 and Condition 18 of the April 9, 2003 permit)

13. The emissions from exhaust stacks (emission unit ID#s: 1S1 - 4S1 and 1 – 7 AE) shall be observed visually at least once each calendar month for at least a brief time period during normal operations to determine if they have any visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded. If an emission point is not operated during the calendar month, then no visible emission observation needs to be performed and a negative declaration shall be entered in the record stating the emission unit was not in operation. Should emission point operation be limited or intermittent, and/or adverse conditions (e.g. weather or darkness) prevail during the limited or intermittent operating period, no visible emission observation needs to be performed and a negative declaration shall be entered in the record along with the date(s) of operation, the hours of operation of the emission unit and a notation indicating inclement weather.
(9 VAC 5-80-110)

14. **On Site Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to:

    a. Annual usage of volatile organic compounds (ethylene oxide), calculated monthly as the sum of each consecutive 12 month period.

    b. The volume of liquid removed from the scrubber system, calculated monthly as the sum of each consecutive 12 month period.

    c. The volume of liquid added to the scrubber system, calculated monthly as the sum of each consecutive 12 month period.

    d. The weekly liquid level in the scrubber supply tank.

    e. The liquid level of the scrubber feed tank prior to the removal and after the addition of any liquid to the system.

    f. Records shall be kept demonstrating the number of nitrogen washes and/or vacuum flushes per product type.

    g. Temperature monitoring data for the catalytic oxidizer.

    h. Calibration data for the temperature monitor.

    i. Records to demonstrate compliance with the work practice outlined in condition III C. 10 for the catalytic oxidizer shall consist of the compliance test, data analysis, and if catalyst is replaced, proof of replacement.

j. Records for all sources which are subject to 40 CFR § 63.362 shall comply with the recordkeeping requirements in 40 CFR § 63.10(b) and (c), according to the applicability in Table 1 of 40 CFR § 63.360, and in section 40 CFR § 63.367(recordkeeping requirements).

k. Records shall be kept demonstrating the heights of the scrubber exhaust stack and the oxidizer exhaust stack.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110, Condition 25 of the April 9, 2003 permit and 40 CFR 63.367(a)&(d))

D. Reporting

1. For all sources (emission unit ID #s: 1S1-4S1 and 1-7 AE) which are subject to the emission standards in 40 CFR § 63.362 (Standards) shall fulfill all reporting requirements in 40 CFR §§ 63.10(a), (d), (e), and (f) of subpart A of 40 CFR Part 63, according to the applicability in Table 1 of 40 CFR § 63.360. These reports will be made to the Administrator at the appropriate address identified in 40 CFR § 63.13 of subpart A of 40 CFR Part 63.
(9 VAC 5-80-110, Condition 26 of the April 9, 2003 permit and 40 CFR 63.366(a))

2. Content and submittal dates for deviations and monitoring system performance reports. All deviations and monitoring system performance reports and all summary reports, if required per 40 CFR § 63.10(e)(3)(vii) and (viii), shall be delivered or postmarked within 30 days following the end of each calendar half or quarter as appropriate (40 CFR § 63.10(e)(3)(i) through (iv) for applicability). Written reports of deviations from an operating limit shall include all information required in 40 CFR § 63.10(c)(5) through (13), as applicable in Table 1 of 40 CFR § 63.360, and information from any calibration test in which the monitoring equipment is not in compliance with PS 9 or the method used for temperature calibration. The written report shall also include the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no deviations have occurred or monitoring equipment has not been inoperative, repaired, or adjusted, such information shall be stated in the report.
(9 VAC 5-80-110, Condition 27 of the April 9, 2003 permit and 40 CFR 63.366(a)(3))

E. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Test ports will be provided at the following locations:

Scrubber exhaust stack
Oxidizer exhaust stack

(9 VAC 5-80-110 and Condition 24 of the April 9, 2003 permit)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC	EPA Methods 24, 24a
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

V. Facility Wide Conditions

1. In order to minimize the duration and frequency of excess emissions due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

   b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

   (9 VAC 5-80-110, Condition 31 of the April 9, 2003 permit)

2. The permittee shall have available written operating procedures for the related air pollution control equipment. Operators shall be trained in the proper operation of all such equipment and shall be familiar with the written operating procedures. These procedures shall be based on the manufacturer's recommendations, at minimum. The permittee shall maintain records of training provided including names of trainees, date of training and nature of training.
   (9 VAC 5-80-110, Condition 32 of the April 9, 2003 permit)

VI. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
B1	Natural Gas Boiler	9 VAC 5-80-720 C. 2,a.	NO_2, SO_2, VOC, CO, PM-10	2.5 MMBtu/hr
B2	Natural Gas Boiler	9 VAC 5-80-720C. 2,a	NO_2, SO_2, VOC, CO, PM-10	2.5 MMBtu/hr

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

VII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of applicability
NA		

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

VIII. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable. (9 VAC 5-80-110 N)

B. Permit Expiration

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.

3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.

4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

    a. The date, place as defined in the permit, and time of sampling or measurements.

    b. The date(s) analyses were performed.

    c. The company or entity that performed the analyses.

    d. The analytical techniques or methods used.

e. The results of such analyses.

f. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than [**March 1** and **September 1**] of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

b. All deviations from permit requirements. For purposes of this permit, a deviation means any condition determined by observation, data from any monitoring protocol or any other monitoring which is required by the permit that can be used to determine compliance. Deviations include exceedances documented by continuous emission monitoring or excursions from control performance indicators documented through periodic or compliance assurance monitoring.

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. A description of the means for assessing or monitoring the compliance of the source with its emissions limitations, standards, and work practices.

3. The identification of each term or condition of the permit that is the basis of the certification.

4. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the certification period.

5. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

6. The status of compliance with the terms and conditions of this permit for the certification period.

7. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

The permittee shall report by the next business day any deviations from permit requirements or any excess emissions, including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.
(9 VAC 5-80-110 F.2)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours, notify the Director, Piedmont Region by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within two weeks provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Piedmont Region.
(9 VAC 5-20-180 C)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)

H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)

J. Permit Action for Cause

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause as specified in 9 VAC 5-80-110 L, 9 VAC 5-80-240 and 9 VAC 5-80-260. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
(9 VAC 5-80-110 G.4)

2. Such changes that may require a permit modification and/or revisions include, but are not limited to, the following:

    a. Erection, fabrication, installation, addition, or modification of an emissions unit (which is the source, or part of it, which emits or has the potential to emit any regulated air pollutant), or of a source, where there is, or there is the potential of, a resulting emissions increase;

    b. Reconstruction or replacement of any emissions unit or components thereof such that its capital cost exceeds 50% of the cost of a whole new unit;

    c. Any change at a source which causes emission of a pollutant not previously emitted, an increase in emissions, production, throughput, hours of operation, or fuel use greater than those allowed by the permit, or by 9 VAC 5-80-11, unless such an increase is authorized by an emission cap; or any change at a source which causes an increase in emissions resulting from a reduction in control efficiency, unless such an increase is authorized by an emissions cap;

d. Any reduction of the height of a stack or of a point of emissions, or the addition of any obstruction which hinders the vertical motion of exhaust;

e. Any change at the source which affects its compliance with conditions in this permit, including conditions relating to monitoring, recordkeeping, and reporting;

f. Addition of an emissions unit which qualifies as insignificant by emissions rate (9 VAC 5-80-720 B) or by size or production rate (9 VAC 5-80-720 C);

g. Any change in insignificant activities, as defined by 9 VAC 5-80-90 D.1.a(1) and by 9 VAC 5-80-720 B and 9 VAC 5-80-720 C.

(9 VAC 5-80-110 G, 9 VAC 5-80-110 J, 9 VAC 5-80-240, and 9 VAC 5-80-260)

K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)

L. Duty to Submit Information

1. The permittee shall furnish to the board, within a reasonable time, any information that the board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.

(9 VAC 5-80-110 K.1)

M. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-305 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-355.
(9 VAC 5-80-110 H)

N. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited, to the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and

5. The prompt removal of spilled or traced dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-50-50)

O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20)

P. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80 Article 1.
(9 VAC 5-80-110 J)

Q. Inspection and Entry Requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

R. Reopening For Cause

The permit shall be reopened by the board if additional federal requirements become applicable to a major source with a remaining permit term of three or more years. Such a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

3. The permit shall not be reopened by the board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)

T. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

U. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

   a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

   b. The permitted facility was at the time being properly operated.

   c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

   d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

V. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The board may suspend, under such conditions and for such period of time as the board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-260)

W. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)

X. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substance subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A - F)

Y. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

Z. Changes to Permits for Emissions Trading

No permit revision shall be required, under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

AA. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110 except subsection N shall be included to determine compliance.

2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)